IF YOU CAN READ 2X2" SLIDES WITHOUT A MAGNIFIER, PEOPLE IN REAR SEATS CAN PROBABLY READ THEM ON THE SCREEN

Effective Lecture Slides

This pamphlet is directed at those who use slides in technical lectures. The recommendations also apply widely to instructional slides. While the emphasis is on 2 by 2-inch slides, the general information applies also to other projected visuals. It is hoped that program chairmen will urge their speakers to follow the recommendations.

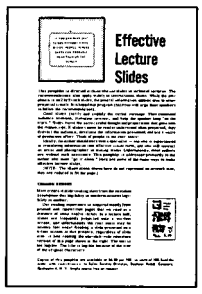
Good slides clarify and amplify the verbal message. They command audience attention, stimulate interest, and help the speaker keep "on the track." Slides merit the same careful thought and preparation that goes into the manuscript. If slides cannot be read or understood when projected, they distract the audience, devaluate the information presented, and are a waste of production effort. Think of people in the rear seats!

Ideally, the author should work with a specialist — one who is experienced in translating information into effective visual form, and who will instruct an artist and photographer in making slides. Unfortunately, most authors are without such assistance. This pamphlet is addressed primarily to the author who must "go it alone." Here are some of the many ways to make effective lecture slides.

COMMON ERRORS

Most errors in slide-making stem from the mistaken assumption that legibility in one form assures legibility in another.

Our reading experience is acquired mostly from printed and typewritten pages that we read at a distance of about twelve inches. In a lecture hall, slides are frequently projected onto a six-foot screen, and unfortunately the rear seats may be seventy feet away! Reading a slide projected on a 6-foot screen at this distance, regardless of slide size, is like reading the one-inch-wide miniature version of this page shown at the right. The text is not legible. The title is legible because of the size of the original characters.



Copies of this pamphlet are available at $6.00 per 100, in units of 100. Send the order, with remittance, to Sales Service Division, Eastman Kodak Company, Rochester 4, N. Y. Single copies free on request.

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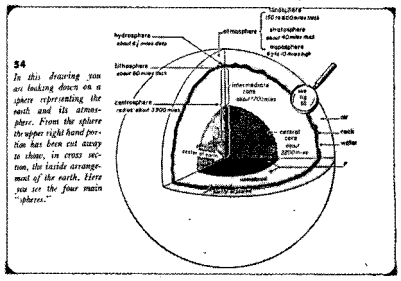
Example 1

Portra Lens Data

Portra Lenses and Focus Setting in Feet		Lens-to-Subject Distance in Inches*	Approximate Field Size for Ready-Mount Picture Area	
			44—46mm Lens	50mm Lens
1+	Inf	39	21 x 30	18 x 26½
	15	32¼	17½ x 24¾	14¾ x 22
	6	25½	13¼ x 19	11½ x 17
	3½	20½	10½ x 15	9 x 13¼
2+	Inf	19½	10⅛ x 15	9 x 13¼
	15	17¾	9¼ x 13⅝	8 x 12
	6	15¼	7¾ x 11½	7 x 10
	3½	13⅛	6½ x 9⅝	6⅛ x 9
3+	Inf	13	6¾ x 10	6 x 8⅞
	15	12¼	6¼ x 9¼	5¾ x 8½
	6	11⅛	5⅝ x 8⅜	5 x 7¼
	3½	9¾	4⅞ x 7¼	4½ x 6⅜
3+ plus 3+	Inf	6¾	3⅞ x 5⅛	3⅛ x 4⅝
	15	6½	3⅝ x 4⅞	2⅝ x 4⅜
	6	6⅛	3⅛ x 4⅛	2⅜ x 4⅛
	3½	5¾	2⅞ x 4¼	2⅝ x 3⅜

*These lens-to-subject distances apply to Kodak Portra Lenses used with **any** camera. The field sizes apply only to the focal lengths shown.

Example 2



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In this drawing you are looking down on a sphere representing the earth and its atmosphere. From the sphere the upper right hand portion has been cut away to show, in cross section, the inside arrangement of the earth. Here you see the four main "spheres."

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This published table (left) is too crowded with data. In such situations, either reduce the data to essential and rounded figures only or present representative data in smaller groupings as shown below. Two or more simple slides are better than one complicated slide.

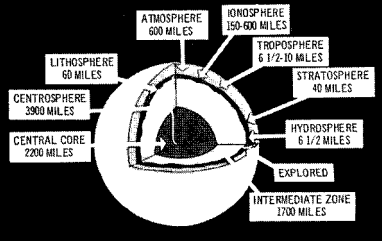
PORTRA LENS DATA
(50MM LENS SET FOR 3-1/2 FT.)

PORTRA LENS	LENS-SUBJ (INCHES)	FIELD SIZE (INCHES)
1+	20-1/2	9 x 13-1/2
2+	13-1/8	6-1/8 x 9
3+	9-3/4	4-1/2 x 6-3/8
3+PLUS 3+	5-3/4	2-5/8 x 3-15/16

The above copy area is in actual working size, chosen for the size of the typewritten character. It is the same area as shown on the template on page 6. Filling a larger area with more typewriter copy would reduce legibility.

Illustrations for Examples 2 through 6 do not represent an artwork size. They are reduced to fit the page.

Illustrations in textbooks are usually drawn carefully and explained in detail, as in the illustration at the left. An attempt to copy such illustrations in slide form usually shows that what may be adequate on the printed page is inadequate on the screen. Line widths must be increased, and captions must be reduced in number, simplified, and increased in size (right).



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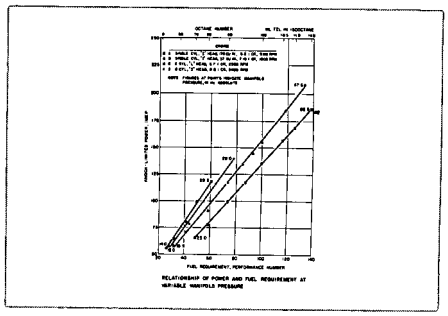
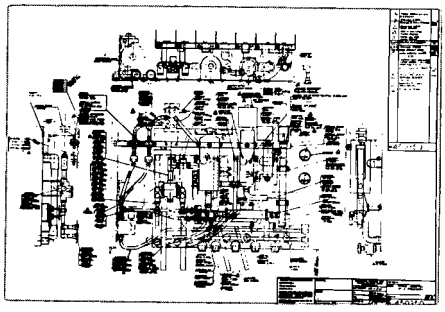
Example 3



Example 4

Example 5



Example 6

POPULATION TRENDS

CITY	YEAR 1900	1940
	POPULATION IN THOUSANDS	
NEW YORK	3437	7455
CHICAGO	1699	3397
PHILADELPHIA	1294	1931
DETROIT	286	1623
LOS ANGELES	[illegible]	[illegible]

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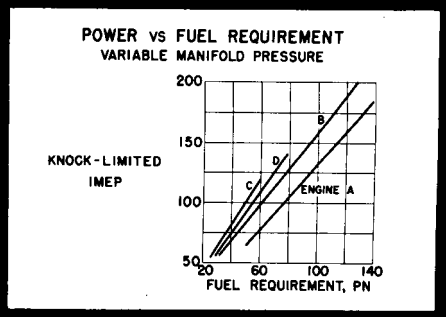
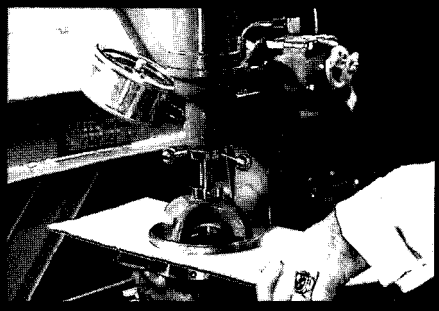
At left is another illustration that is satisfactory in a technical report but has a caption that is too long and set in too small typeface for use as a legible slide. On the right is the graph redrawn with larger and simplified captions.

Line graphs reproduced from pamphlet, Make Slides Worth While, courtesy of author B. A. Jones, Ethyl Corporation.

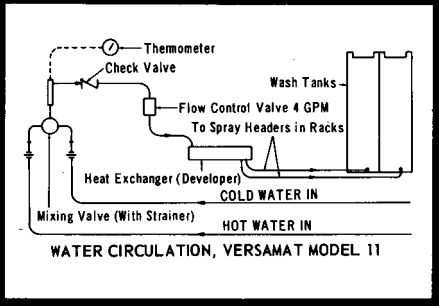


Artwork need not necessarily be shown in its entirety. Unless all the surroundings of a particular operation must be shown, don't. Maybe an overall view and a close-up are needed. A close-up presents important details clearly. This slide, right, was made from a selected portion of the original negative.

Cropping in the camera is always preferable. However, if this has not been done and the author has slides made for him, he should indicate proper cropping on each print.



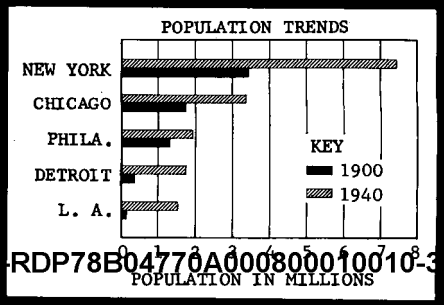
If you reduce a blueprint to slide form and project it, the screen image will be illegible (left). Lines will be too faint, lettering will be too small, and the narrator will usually lose his audience while trying to explain in words what the audience should be seeing. Either a thick-line tracing made with crayon, felt-nib pen, etc, of essentials or a simplified version as shown at the right is preferable.



WATER CIRCULATION, VERSAMAT MODEL 11

The significance of data can be grasped more quickly in graph form than in tabular form. In the table, left, population increase is not immediately evident. In the graph, comparisons are made easily. Use rounded figures.

Keep graphs simple. Be sparing in the use of captions.



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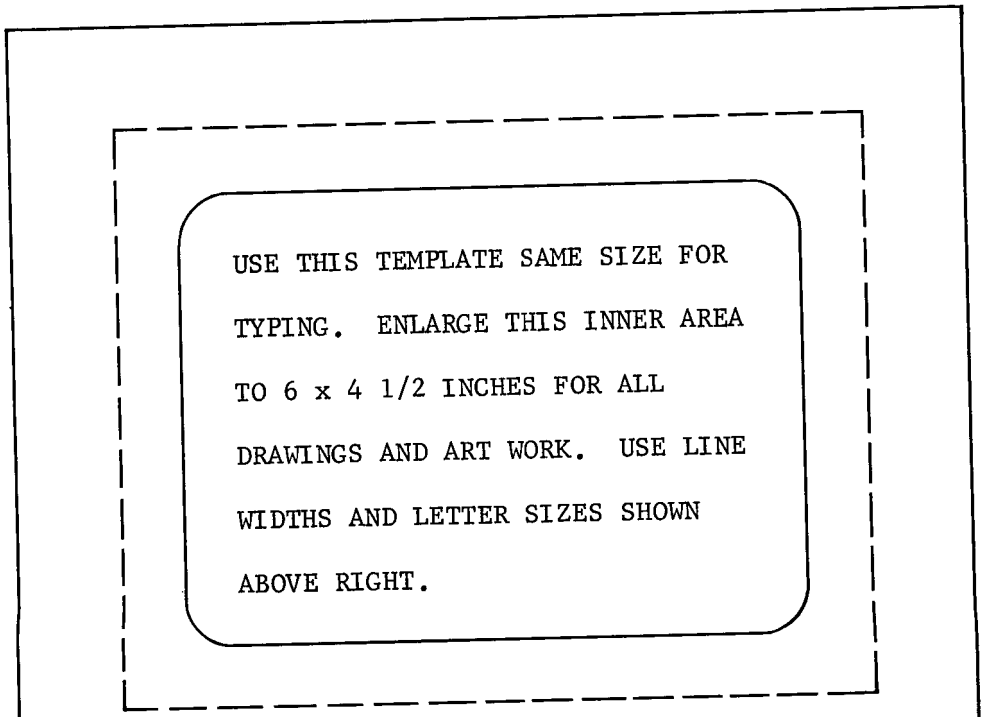
TEMPLATE FOR TYPEWRITTEN COPY FOR 35MM SLIDES

Use the template below, same size, as your guide for typing title and text slides. The projected image of the slide will be legible if all copy is typed within the area defined by the inner solid line. The template is also good for use with standard black-and-white or color photofinishing prints. The art work or picture area of a photographic print should extend to the dotted line.

If lower-case pica typewriter type is used, the text will be legible at about 45 feet from a 72-inch screen.

If only capital letters of elite type are used, the projected image should be legible at a somewhat greater distance.

Also use this template as a target for setting up a 35mm camera to photograph your typed titles. (A 50mm lens focused for 3 1/2 feet and with two 3+ KODAK PORTRA Lenses added or a 50mm KODAK RETINA Lens with an R1:3 lens added will include the proper area.) When set up and focused, the camera should just barely include the dotted-line rectangle. (The space between the dotted line and solid line is a necessary margin for safety.) Once the camera is set up, positions of the corners of the template can be marked, the template removed, and the typed titles carefully placed in the same position for photographing. The template can also be used for drawings (see below).


USE THIS TEMPLATE SAME SIZE FOR
TYPING. ENLARGE THIS INNER AREA
TO 6 x 4 1/2 INCHES FOR ALL
DRAWINGS AND ART WORK. USE LINE
WIDTHS AND LETTER SIZES SHOWN
ABOVE RIGHT.

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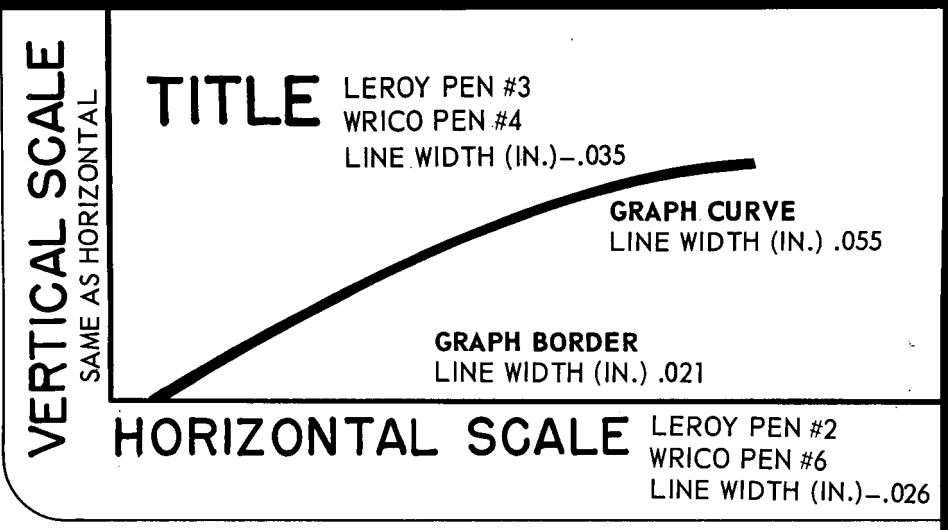

LINE WEIGHT

Line weights should be planned carefully for greatest legibility. Curves should be relatively prominent. Coordinate axes and grid lines should be clearly visible but relatively inconspicuous.

The above illustration is reproduced same size from a portion of the original material which measured 6 inches wide and 4 1/2 inches high. Reference for grid and line weights: ASA Y15.1-1959.

OBSERVE THESE IMPORTANT POINTS

- Use 2 x 2-inch color slides — they are more effective; easier to make; and cheaper, considering darkroom time. Color film is also convenient for black-and-white copy slides.
- Use a dark-colored background — it is better than black or white.
- Limit each slide to one main idea.
- Use a slide series for progressive disclosure — it clarifies greatly.
- Limit each slide to 15 to 20 words, or 25 to 30 data; include no more than you will discuss.
- Leave space — at least the height of a capital letter — between lines.
- Include titles to supplement, not duplicate, slide data.
- Use several simple slides rather than one complicated one, expecially if you must discuss something at length.
- Use duplicates if you need to refer to the same slide at several different times in your talk. It is not practical to ask the projectionist to reshow a slide.
- Plan your slides for a good visual pace in your presentation. Don't leave a slide on the screen after discussing its subject.
- Thumb-spot all slides in the lower-left corner when the slide reads correctly on hand viewing. Add sequence numbers.

PREPARE FOR A SMOOTH PRESENTATION

- Rehearse your slide presentation several times so that you will be familiar with the order of the slides.
- Several days in advance, let the program chairman know the size and mounting (glass, metal, ready-mount, etc.) of your slides, and the kind of

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tray you will use, so that he will be sure to provide the right projector. Be sure you use a widely acceptable mount.

- On your trip, carry your slides with you. Don't trust them to your baggage if it is checked through.
- Check with the projectionist early concerning the required projector. Also, plan for the time it will take to load a projector tray.
- Request a projector with remote control that you can operate from the lectern. Otherwise, have a signal light for the projectionist or prearrange some other silent signal for him.
- Give your slides to the projectionist before the meeting, when you'll have time to discuss any special instructions with him. If you wait to do this until just before your talk, he may then be busy with the previous speaker's slides.
- Use the slides to supplement and support your oral presentation, not simply to repeat what you are saying.
- Request a pointer, if needed, and know how to use it.
- In the interests of most effective projection of your slides, give the man in charge of local arrangements a copy of Foundation for Effective Audio-visual Projection (KODAK Pamphlet No. S-3) well ahead of the meeting; see reference list.
- Consider your audience size in terms of screen size and projector output. As an example, an audience of 400 needs both a screen 12 feet wide and a capable projector.

REFERENCES

American Standard Publication, **Illustrations for Publication and Projection, ASA Y 15.1-1959.** 10 E 40 St., New York 16, N. Y.

Further detailed information can be found in the following pamphlets. Single copies are available upon request from the address below. When ordering, be sure to mention both the title and the letter-number designation of each publication desired.

Art-Work Size Standards for Projected Visuals (S-12)
Foundation for Effective Audiovisual Projection (S-3)
Legibility Standards for Projected Material (S-4)
Planning and Producing Visual Aids (S-13)

The following publications are sold by your local Kodak dealer:

Photographic Production of Slides and Filmstrips (S-8), 52 pages. $1.00.
Basic Titling and Animation (S-21), 64 pages. $1.00.
Kodak AV Handbook (W-27). Contains S-8 and S-21 (above), plus
Industrial Motion Pictures, Magnetic Sound Recording for Motion Pictures, and appropriate pamphlets. $6.95.

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